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DD-91 +6

[Redacted]

25X1

H2061-ARA-50-55

[Redacted]

December 7, 1955

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Subject: Minutes of Meetings with Department of Defense and [Redacted] on November 28 and December 1, 1955.

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Present:

[Redacted]

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# 1. Antennas

- a. An extended discussion of antenna size and configuration led to a decision to revise the frequency assignments of the bands below 1000 megacycles. The following shows the frequency range of each band and the probable antenna type:

<u>Band</u>	<u>Frequency Range - Mc</u>	<u>Probable Antenna Type</u>
1	70 - 170	dipole
2	170 - 400	dipole
3	400 - 1000	helix
4	1000 - 2200	helix
5	2200 - 4500	helix
6	4500 - 10,000	helix or horn
7	10,000 - 20,000	horn
8	20,000 - 40,000	horn

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- b. The change from 50 to 70 megacycles results in a substantial decrease in overall package size. The signals in the 50 to 70 megacycle region will still be receivable, although the antenna gain will be reduced. The band rearrangements below 1000 megacycle eliminates one large helical antenna, resulting in further size reduction. A sketch is attached showing the most likely package configuration. The dipoles for bands 1 and 2 are not covered by the radome. The center section will house bands 3 to 6 and the top section will contain the high frequency horns.
- c. For bands 4, 5 and 6 there is a choice between the AEL helix and the NRL horn. Comparison tests are to be made to aid in making a decision for one or the other type. Pattern measurements on band 5 of the AEL unplated helix and the GLE "S" band horn show advantages in favor of the helix. Further checks will be made on this band and on bands 4 and 6 now with the receipt of the GLE "L" band horn and the fabrication of an "X" band horn by AEL.
- d. F. Smith expects that a visit to the site of the vessel upon which the antenna will be mounted will be arranged within two weeks. This is to determine the compatibility of the size of the antenna with the vessel involved; the location of the antenna with respect to other structures; the possible mounting for the antenna and the availability of battery charging facilities.

ARA/rl

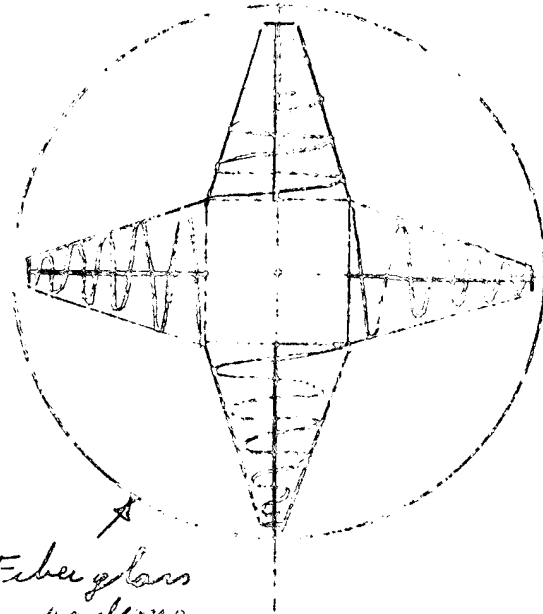
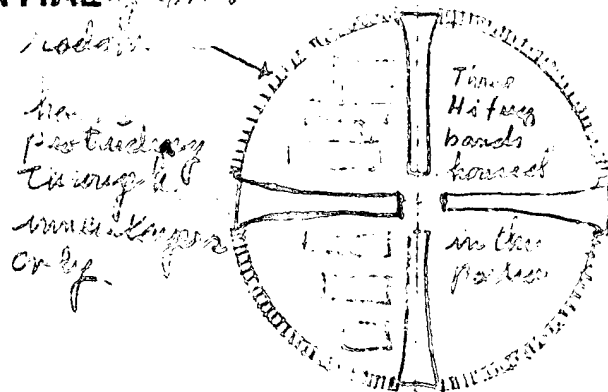
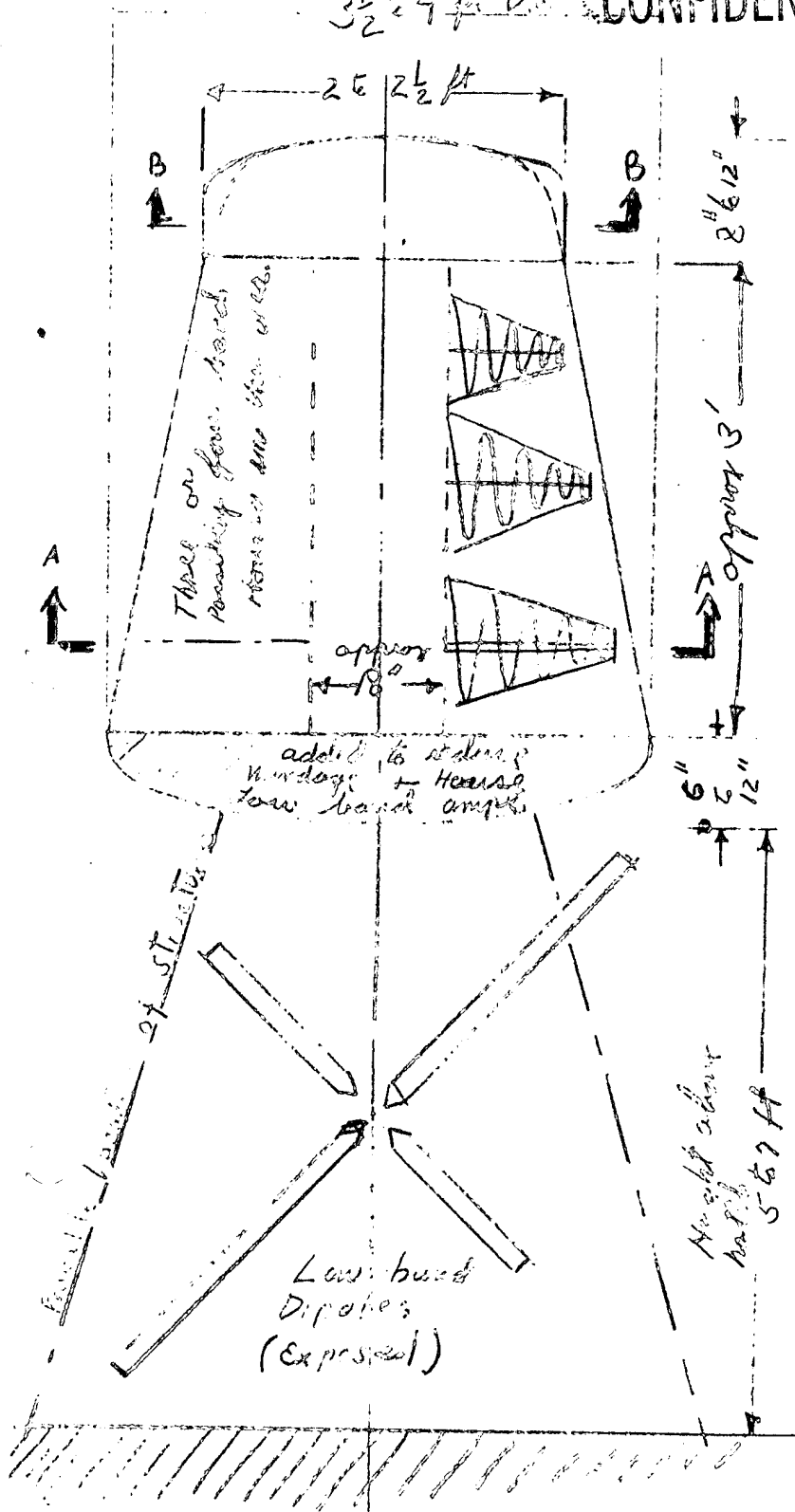
cc: All present

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3 1/2 x 9 ft. **CONFIDENTIAL**



Fiber glass  
rod dome  
(removable)

Est Weight

upper part 300 lbs

Overall 500 lbs

General Configuration for  
H2061 Antenna

The configuration and approx dimensions as shown  
were provided upon the  
arrival [redacted] during a visit to [redacted] a Colonel's [redacted]  
on 12-1-55

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